ESG RATINGS METHODOLOGY

Executive Summary

MSCI ESG Research

May 2015
1 EXECUTIVE SUMMARY

From natural resource scarcity to changing governance standards, from global workforce management to the evolving regulatory landscape, ESG factors can impact the long-term risk and return profile of investment portfolios. MSCI ESG Ratings are designed to help investors understand ESG risks and opportunities and integrate these factors into their portfolio construction and management process.

Our global team of 140 experienced research analysts assesses thousands of data points across 37 ESG Key Issues, focusing on the intersection between a company’s core business and the industry issues that can create significant risks and opportunities for the company. Companies are rated on a AAA-CCC scale relative to the standards and performance of their industry peers.

Figure 1 ESG Rating Framework and Process Overview

DATA
1000+ data points on ESG policies, programs, and performance; Data on 65,000 individual directors; 13 years of shareholder meeting results

EXPOSURE METRICS
How exposed is the company to each material issue? Based on over 80 business and geographic segment metrics

MANAGEMENT METRICS
How is the company managing each material issue? 600 policy/program metrics, 240 performance metrics; 96 Governance KeyMetrics

KEY ISSUE SCORES & WEIGHTS
37 Key Issues selected annually for each industry and weighted based on MSCI’s materiality mapping framework.

ESG RATING (AAA-CCC)
Issue scores and weights combine to overall ESG rating relative to industry peers. E, S, G scores also available

SOURCES
100+ specialized datasets (government, NGO, models)
Company disclosure (10-K, sustainability report, proxy report);
1600+ media sources monitored daily (global and local news sources, government, NGO).

MONITORING & QUALITY REVIEW
Systematic ongoing daily monitoring of controversies and governance events; In-depth quality review processes at all stages of rating, including formal committee review.

INSIGHT
Specialized ESG research team provides additional insight through:
Company reports
Industry reports
Thematic reports
Analyst calls & webinars

DATA OUTPUTS
Access to selected underlying data
Ratings, scores, and weights on 350,000 securities
16 years of history

MAY 2015
1.1 ESG RATING PROCESS OVERVIEW

DATA SOURCES

To assess companies’ exposure to and management of ESG risks and opportunities, we collect data from the following sources:

- Macro data at segment or geographic level from academic, government, NGO datasets
- Company disclosure (10-K, sustainability report, proxy report, AGM results, etc.)
- Government databases, 1600+ media, NGO, other stakeholder sources

Companies are invited to participate in a formal data verification process.

MONITORING AND QUALITY REVIEW

Companies are monitored on a systematic and ongoing basis, including daily monitoring of controversies and governance events. New information is reflected in reports on a weekly basis and significant changes to scores trigger analyst review and re-rating. Companies receive an in-depth review at least annually.

Formal in-depth quality review processes take place at each stage of analysis, including automated and quality checks of data and rating publication; industry and market lead oversight of ratings and reports; Methodology Committee approval of any exceptions, truncations, or major (2+) rating changes; and a Ratings Review Committee to review contentious cases.

RISK EXPOSURE AND RISK MANAGEMENT ANALYSIS

MSCI ESG Ratings calculate each company’s exposure to key ESG risks based on a granular breakdown of a company’s business: its core product or business segments, the locations of its assets or revenues, and other relevant measures such as outsourced production.

The analysis then takes into account the extent to which a company has developed robust strategies and demonstrated a strong track record of performance in managing its specific level of risks or opportunities. Ongoing or structural controversies occurring within the last three years lead to a deduction from the overall management score on each issue.

KEY ISSUE SCORES AND WEIGHTS

MSCI ESG Ratings identify six to ten key ESG issues where companies in that industry currently generate large environmental or social externalities; these are issues where some
companies may be forced to internalize unanticipated costs associated with those externalities in the future. Corporate Governance is assessed for all companies.

Weights are set at the GICS Sub-Industry level (8-digit) based on each industry’s relative impact and the time horizon associated with each risk. Key Issues and weights undergo a formal review and feedback process at the end of each calendar year.

Company-specific exceptions are allowed, subject to committee approval, for companies with diversified business models, facing controversies, or based on industry rules.

Figure 2  MSCI ESG Key Issue Hierarchy

<table>
<thead>
<tr>
<th>3 Pillars</th>
<th>10 Themes</th>
<th>37 ESG Key Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment</td>
<td>Climate Change</td>
<td>Carbon Emissions*</td>
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<td></td>
<td></td>
<td>Energy Efficiency</td>
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<td></td>
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<td>Product Carbon Footprint</td>
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<td></td>
<td>Natural Resources</td>
<td>Water Stress*</td>
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<td></td>
<td></td>
<td>Biodiversity &amp; Land Use</td>
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<td></td>
<td>Pollution &amp; Waste</td>
<td>Toxic Emissions &amp; Waste*</td>
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<tr>
<td></td>
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<td>Packaging Material &amp; Waste</td>
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<tr>
<td></td>
<td>Environmental Opportunities</td>
<td>Opportunities in Clean Tech</td>
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<td></td>
<td></td>
<td>Opportunities in Green Building</td>
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<tr>
<td>Social</td>
<td>Human Capital</td>
<td>Labor Management*</td>
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<td></td>
<td></td>
<td>Health &amp; Safety*</td>
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<td></td>
<td>Product Liability</td>
<td>Product Safety &amp; Quality</td>
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<td>Chemical Safety</td>
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<td>Financial Product Safety</td>
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<td>Stakeholder Opposition</td>
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<td>Controversial Sourcing</td>
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<tr>
<td>Social Opportunities</td>
<td>Access to Communications</td>
<td>Access to Health Care</td>
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<td></td>
<td>Access to Finance</td>
<td>Opp’s in Nutrition &amp; Health</td>
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<tr>
<td>Governance</td>
<td>Corporate Governance*</td>
<td>Board**</td>
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<td></td>
<td></td>
<td>Pay**</td>
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<tr>
<td></td>
<td>Corporate Behavior</td>
<td>Business Ethics*</td>
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<tr>
<td></td>
<td></td>
<td>Anti-Competitive Practices*</td>
</tr>
</tbody>
</table>

* indicates “universal” issues assessed for all companies in MSCI World

** Board, Pay, Ownership, and Accounting carry weight in the ESG Rating model for all companies. Currently, they contribute to the Corporate Governance score directly and 0-10 sub-scores are not available.

ESG RATINGS

To arrive at a final letter rating, the weighted averages of the Key Issue Scores are aggregated and companies’ scores are normalized by their industries. After any overrides are factored in, each company’s Final Industry-Adjusted Score corresponds to a rating...
between best (AAA) and worst (CCC). These assessments of company performance are not absolute but are explicitly intended to be relative to the standards and performance of a company’s industry peers.

1.2 PRODUCT FEATURES

MSCI ESG Ratings clients receive access to a database of company reports and industry reports. Each company report includes relevant ESG performance data as well as an analysis of possible ESG risks and opportunities facing the company. Industry reports provide updates on the ESG landscape of each industry, and allow for benchmarking of how global players are positioned to anticipate challenges and to tap opportunities relative to peers.

MSCI ESG Ratings clients also receive scores for each company that include the final company rating and overall industry-adjusted score; weights and scores for each of the E, S, and G pillars; weights and scores for each of the Issues that contribute to the overall rating; and weights and scores for additional ESG issues that clients may incorporate into their own analysis (Carbon Emissions, Water Stress, Toxic Emissions & Waste; Labor Management; Health & Safety; Corporate Governance; Business Ethics; Anticompetitive Practices).

MSCI ESG Ratings scores and/or reports are currently available on MSCI’s proprietary platform, MSCI ESG Manager, as well as through FactSet, POINT, StyleResearch, and MSCI’s BarraOne and Barra Portfolio Manager platforms.

When used in conjunction with conventional financial analysis and valuation methods, MSCI ESG Ratings are designed to help clients:

- Integrate ESG factors into their investment approaches;
- Screen portfolios and trades for emerging and overlooked risks;
- Generate investment ideas using positive and negative outliers on specific ESG issues;
- Generate investment ideas based on ESG developments impacting key industry drivers;
- Conduct due diligence for transactions;
- Determine opportunities for engagement with company management;
- Support implementation of the UN Principles for Responsible Investment (PRI):
  - Smoothly integrate ESG considerations into the investment processes by focusing on the most significant issues — Principle 1*
  - Support efforts to engage companies on ESG issues — Principle 2*
  - Support efforts to encourage companies to make material ESG-related disclosure by providing benchmarking against peers on key ESG metrics — Principle 3*
  - Help asset owners to monitor their implementation of ESG principles — Principle 4*
  - Help asset managers to report on ESG mandates — Principle 6*
1.3 COVERAGE

The ESG Ratings coverage universe comprises the following as of December 2014:

- MSCI World Index
- MSCI Emerging Markets Index
- MSCI US Investable Market Index (IMI)
- MSCI UK IMI (new)
- MSCI Nordic IMI (new)
- MSCI Australia IMI (new)
- MSCI South Africa IMI
- MSCI Canada IMI

- Fixed Income: ESG Ratings coverage of over 84% of the market value of a widely used global fixed income benchmark, including:
  - Approximately 90% of the corporate investment grade (listed and non-listed)
  - Approximately 90% of the covered bonds
  - Approximately 99% of the Treasuries/Sovereign*
  - Approximately 85% of the government related (ex-Sovereign)*

*The overall ESG Rating for government-related bond issuers will be either in the ESG Ratings or Government ESG Rating framework.

- More than 8,000 issuers linked to 280,000 individual securities including selected Agencies and Supranationals

Additions to the MSCI ACWI Index and the US IMI will be rated within one quarter from their addition to the relevant index, while other companies will be rated within two quarters from their addition to the relevant index.

Companies are monitored on a systematic and ongoing basis, including daily monitoring of controversies and governance events. New information is reflected in reports on a weekly basis and significant changes to scores trigger analyst review and re-rating. Companies receive an in-depth review at least annually.
Note: The full set of governance metrics is available to be viewed and downloaded with an ESG Ratings subscription. A subset of metrics is available to be viewed in the company profile with an IVA subscription.

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MSCI ESG Research products and services are provided by MSCI ESG Research Inc., and are designed to provide in-depth research, ratings and analysis of environmental, social and governance-related business practices to companies worldwide. ESG ratings, data and analysis from MSCI ESG Research Inc. are also used in the construction of the MSCI ESG Indexes. MSCI ESG Research Inc. is a Registered Investment Adviser under the Investment Advisers Act of 1940 and a subsidiary of MSCI Inc.

ABOUT MSCI

For more than 40 years, MSCI’s research-based indexes and analytics have helped the world’s leading investors build and manage better portfolios. Clients rely on our offerings for deeper insights into the drivers of performance and risk in their portfolios, broad asset class coverage and innovative research.

Our line of products and services includes indexes, analytical models, data, real estate benchmarks and ESG research.

MSCI serves 98 of the top 100 largest money managers, according to the most recent P&I ranking.
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